IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	George R. Borden IV	Group Art Unit:	2621
Serial No.:	10/821,294	Examiner:	Czekaj, David J.
Filed:	April 9, 2004	Customer No.:	55648
Title:	METHOD OF SELECTING AND GENERATING FEEDBACK IN OBJECT TRACKING SYSTEMS		

APPELLANT'S BRIEF

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October 27, 2008

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

BACKGROUND

This brief is in furtherance of the Notice of Appeal, filed in this case on August 27, 2008.

The fees required under 37. C.F.R. § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief comprises these subjects under the headings, and in the order, set forth below:

I. Real Party in Interest

II. Related Appeals and Interferences

III. Status of Claims

IV. Status of Amendments

V. Summary of Claimed Subject Matter

VI. Grounds for Rejection to be Reviewed on Appeal

VII. Argument

VIII. Conclusion

IX. Claims Appendix

X. Evidence Appendix

XI. Related Proceedings Appendix

The final page of this brief bears the practitioner's signature.

REAL PARTY IN INTEREST

The real party in interest in this appeal is Sharp Laboratories of America, Inc., assignee of the captioned application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION

There are 3 claims currently pending in the application.

B. STATUS OF ALL CLAIMS

Claims canceled:	1-26, 30-32
Claims withdrawn:	None
Claims pending:	27-29
Claims allowed:	None
Claims objected to:	None
Claims rejected:	27-29

C. CLAIMS ON APPEAL

Claims 27-29 are on appeal.

A copy of the claims on appeal is set forth in the Claims Appendix to this Brief.

STATUS OF AMENDMENTS

No amendment was filed after final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter of the present application is directed to a method of advising an operator of an object tracking system (e.g., within a visual surveillance system) of the performance of that system. The claimed subject matter is most broadly recited in independent claim 27, which recites two claimed steps. The first claimed step is monitoring a level of confidence that the tracking system is tracking a target. *See, e.g.* Specification at p. 7 lines 10-11.

The second claimed step is increasing magnification of an image visible to the operator in response to a decrease in the level of confidence. *See Id.* at p. 7 lines 11-12.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The ground of rejection presented for review is whether claims 27-29 are unpatentable under 35 U.S.C. §103(a) over Loveland, U.S. Pat. No. 6,437,819 in view of Yu., U.S. Pat. No. 5,434,621.

ARGUMENT

The Examiner rejected claims 27-29 under 35 U.S.C. § 103(a) as being obvious in view of the combination of Loveland and Yu. Independent claim 27, from which the remaining claims each respectively depend, recites the limitations of "monitoring a level of confidence that said tracking system is tracking a target" and "increasing magnification of an image visible to said operator in response to a decrease in said level of confidence." The Examiner alleges that Loveland discloses the first of these two limitations, Yu discloses the second, and that one of ordinary skill in the art would modify Loveland using Yu so as to arrive at the limitations of claim 27. The latter two of these contentions are incorrect.

First, though Loveland discloses monitoring a level of confidence that a target is being tracked, Loveland also discloses that if such confidence decreases, the magnification should also decrease, i.e., Loveland *teaches away* from the claimed invention, a fact that alone renders claim 27 non-obvious over the cited prior art. The Examiner attempts to gloss over this disclosure in Loveland by simply asserting that the reference discloses "altering" the magnification of an image as the confidence that an object is being tracked decreases. The uncontested fact is,

however, that Loveland specifically teaches *increasing* the magnification in such an event, while claim 27 requires precisely the opposite.

The Examiner, though acknowledging this contradictory teaching of Loveland, contends that "adjusting (increasing or decreasing) magnification in response to *certain events* is well known in the art" and citing *KSR v. Teleflex*, concludes that "all the elements are known, could have been combined without any change of function, and would give *predictable* results." *See* Office Action dated July 24, 2008 at p. 2. (emphasis added). The Examiner's reasoning is flawed. First, the vague assertion that it is well known to "adjust" magnification in response to "certain events" merely demonstrates that the Examiner is attempting to avoid the specific teachings of the prior art, which is that one should *decrease* magnification in response to the specific event of a diminished confidence that an object is being tracked. Similarly, the suggestion that the claimed steps achieve a "predictable" result simply has no basis in the *specific teachings* of the cited prior art, which would actually indicate that the claimed step of increasing magnification would *further reduce* the confidence that an object is being tracked, rather than produce the useful result of restoring confidence that an object is being tracked. The notion that an Examiner can ignore the specific teachings of the primary reference, to support a finding that it would be obvious to do the opposite of what is specifically taught, turns the obviousness analysis of *KSR v. Teleflex* on its head. *See* KSR v. Teleflex, 550 U.S. ___ (2007)(slip opinion at 12) ("When the prior art teaches away from combining certain known elements, discovery of successful means of combining them is more likely to be nonobvious. . . . The fact that the elements worked together in an unexpected and fruitful manner supported the conclusion that Adams' design was not obvious to those skilled in the art.")

Moreover, the Examiner's assertion that the secondary reference, Yu, teaches increasing the magnification of a lens in response to a decrease in confidence that an object is being tracked is also false. Yu discloses a photographic apparatus that automatically maintain the size of a subject in a picture frame, even as the target moves toward or away from the photographer. To achieve this desired result, Yu uses the auto-focus (AF) motor of a camera (still or video) in conjunction with data from the zoom level to calculate the distance to the subject once the photographer initially focuses on the subject. Specifically, knowing the AF motor position (what Yu calls the AF count) and the current magnification level, the distance to the in-focus plane, as well as the depth of field can be calculated. As the AF motor continually adjusts to maintain focus on a moving subject, the change in distance from the original position can be calculated, and the magnification level automatically increased or decreased so as to maintain the size of the subject in the field of view of the lens.

With this in mind, the Examiner's assertions regarding the teachings of Yu are easily dispensed with. The system of Yu assumes (and in fact only works if) the camera's AF system is *constantly* directed on the target, due to the user's *manual* movement of the camera. In other words, since Yu always presumes that the target is in fact, being tracked, Yu cannot be considered to be monitoring a "confidence level" that a target is being tracked and adjusting the magnification accordingly. Rather, the change in magnification is in response to the detected movement (towards or away from the camera) of an object *being* tracked, not any uncertainty as to *whether* the target is being tracked.

The Examiner seems to, at least implicitly, recognize this issue, arguing that the "confidence level" with respect to Yu is "the comparison of the focus count which indicates that the object is moving away or the confidence level is decreasing." Even setting aside the question

of whether an "object moving away" can be considered a "confidence level", it is certainly not the confidence level as taught by Loveland. For the Examiner's rejection to make sense, the term "confidence level" must be read consistently between the primary and secondary reference. The Examiner's rejection does not do this, instead trying to redefine the term "confidence level" midstream so as to cobble together two disparate techniques and ostensibly arrive at the claimed invention. An obviousness rejection cannot be based on this type of inconsistency.

The Examiner further argues that "when an object is moving away from the system, the object appears smaller thus making the object more difficult to track." Even setting aside the fact that this argument is not founded on any disclosure in the cited prior art, it is still irrelevant; as noted earlier, the method of Yu to maintain the size of an object in the field of view by increasing or decreasing magnification, as appropriate, only works on the assumption that the camera's auto-focus system is *already tracking* the subject. Hence Yu's teaching of increasing magnification is unrelated to a *confidence* that an object is being tracked.

The Examiner appears to be making a logical fallacy. Yu teaches automatically zooming in on an object that is being tracked (albeit manually) and that is moving away from a user, so as to maintain the aesthetic quality of an image. The Examiner asserts that an object getting smaller in a picture becomes more difficult to track. The Examiner then concludes that Yu *teaches* zooming in on an object *because* it is more difficult to track. The flaw in this reasoning is twofold. First, it reverses cause and effect; one effect of Yu's magnification may be to prevent degradation in confidence that an object is being tracked, but that does not necessarily imply that if one is not confident that an object is being tracked, one should increase magnification. After all, as indicated by the primary reference, the opposite recommendation is what is recommended in the prior art. Secondly, the asserted effect of maintaining a level of confidence that an object is

being tracked (due to increasing magnification) is not *actually taught* in the cited reference. Though the Examiner argues that the combination of Loveland and Yu *could* be combined to achieve that asserted, desirable effect, it is the teachings of the prior art references that are relevant to the obviousness inquiry, and not whether the steps or elements of disparate references can or cannot be physically combined.

Because the Examiner's obviousness analysis ignores the actual teachings of the cited prior art references, the applicant respectfully requests that rejection of claims 27-29 under 35 U.S.C. § 103(a) be reversed.

CONCLUSION

The Examiner's respective rejections of claims 2-24 should be reversed, and the claims should be found patentable.

Respectfully submitted,

October 17 2008
Dated

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CLAIMS APPENDIX

1-26. (Canceled)

27. The method of advising an operator of the performance of an object tracking system comprising the steps of:

(a) monitoring a level of confidence that said tracking system is tracking a target; and

(b) increasing magnification of an image visible to said operator in response to a decrease in said level of confidence.

28. The method of claim 27 wherein said magnification is changed incrementally as said level of confidence decreases.

29. The method of claim 28 wherein said magnification is increased when said confidence level falls below a first threshold and decreased when said confidence level falls below a second threshold less than said first threshold.

30-32 (Canceled).

EVIDENCE APPENDIX:

None.

RELATED PROCEEDINGS APPENDIX:

None.